

WHAT IS CLAIMED IS:

1. A lithographic projection apparatus, comprising:
  - a radiation system configured to supply a projection beam of radiation;
  - a patterning structure configured to pattern the projection beam according to a desired pattern;
- 5       a substrate table configured to hold a substrate;
- a projection system configured to project the patterned beam onto a target portion of the substrate; and
- a fluid processing cell in fluid communication with a surface of a substrate held on the substrate, wherein a fluid can be brought into contact with the substrate so as to interact
- 10       with the target portion, the fluid processing cell comprises a plurality of separate chambers in fluid communication with respective areas of a substrate held on the substrate table, and different areas of the substrate may be subjected to different fluid or exposure processes simultaneously.
- 15       2. An apparatus according to claim 1, wherein the fluid processing cell comprises a plate member having walls projecting therefrom to contact the substrate to define the plurality of chambers.
3. An apparatus according to claim 2, wherein the plate member has within it a
- 20       plurality of fluid channels communicating with the chambers.
4. An apparatus according to claim 1, wherein each chamber is elongate and has a fluid inlet at a first end thereof and a fluid outlet at a second end thereof.
- 25       5. An apparatus according to claim 4, wherein the height of each the chamber decreases from the fluid inlet toward the fluid outlet and capillary forces assist in removal of fluid from the cell.
6. An apparatus according to claim 1, wherein at least one surface of the fluid
- 30       processing cell is provided with an anti-reflection coating.

7. An apparatus according to claim 1, wherein the height of each chamber is selected so as to minimize reflections of the radiation when a fluid is present in the chamber.

5 8. An apparatus according to claim 1, wherein the fluid processing cell is integrated into the substrate table.

9. An apparatus according to claim 1, wherein the fluid processing cell is separable from the substrate table and a substrate can be attached to the fluid processing cell before  
10 the cell and substrate are together loaded onto the substrate table.

10. An apparatus according to claim 1, wherein the fluid processing cell is separable from the substrate table and a substrate can be placed on the substrate table and the fluid processing cell placed on at least one of the substrate and the substrate table.

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11. A device manufacturing method, comprising:  
providing a substrate to a substrate table in a lithographic projection system;  
providing a projection beam of radiation using a radiation system;  
patterning the projection beam in its cross-section;  
20 projecting the patterned beam of radiation onto a target portion of the layer of radiation-sensitive material; and

processing an area of the substrate by exposing it to a fluid that interacts therewith to effect a process while the substrate is held by the substrate holder, wherein the area of the substrate does not include the target portion and the projecting and processing are  
25 carried out at least partially simultaneously.

12. A method according to claim 11, wherein the interaction with the substrate comprises at least one of:

a chemical reaction with the substrate surface or compounds thereon;  
30 removal of part of the substrate or compounds thereon;  
addition of compounds to the substrate;  
washing; and

modification of the surface or atomic or electronic structure of the substrate or compounds adhered thereto.

13. A method according to claim 11, further comprising a second processing of exposing a second area of the substrate to a second fluid that interacts therewith to effect a second process, the second area being different than the area, the second process being different than the process and the second processing being carried out at least partially simultaneously with the processing.

14. A lithographic apparatus, comprising:  
a radiation system that supplies a beam of radiation;  
a patterning structure support that is constructed to support a patterning structure, the patterning structure capable of patterning the beam of radiation;  
a substrate table for holding a substrate;  
a projection system for projecting the patterned beam of radiation onto a target portion of the substrate,  
a fluid processing cell in fluid communication with a surface of a substrate held on the substrate table, the fluid processing cell comprising a plurality of separate chambers in fluid communication with respective areas of the substrate held on the substrate table.

15. A lithographic apparatus according to claim 14, wherein at least two of the chambers receive different fluids for different exposure processes at different respective areas of the substrate.

16. A device manufacturing method, comprising:  
providing a substrate;  
projecting a patterned beam of radiation onto a target portion of a layer of radiation-sensitive material on the substrate; and  
processing an area of said substrate by exposing it to a fluid that interacts therewith, the area of the substrate not including the target portion, wherein the projecting and the processing steps are carried out at least partially simultaneously.